EFFECT OF LASER THERAPY ON GCFCALPROTECTIN LEVEL IN TYPE II DIABETICPATIENTS-A CLINICAL AND BIOCHEMICAL STUDY

ABSTRACT:

The aim of this study was to evaluate the adjunctive effect of a low level laser in non surgical periodontal treatment of diabetic patients with chronic periodontics. In diabetic patients, hyperglycemia could indirectly exacerbate inflammatory tissue destruction.Calprotectin is a heterodimer of calcium-binding protein contained in the cystosol of neutrophils, monocytes/macrophages and epithelial cells. Calprotectin exists normally in human plasma, saliva, and feces. Its level elevates remarkably in various infections and tissue damaging disorders like diabetes mellitus. The concentrations of calprotectin and its subunits were significantly higher in diseased sites than in healthy sites. In our study the concentration of calprotectin level has been compared among patients treated with SRP+LASER and SRP alone. The use of lasers has been proposed for its bactericidal and detoxification effects and for its capacity to reach sites that mechanical instrumentation. Treatment of periodontal diseases by scaling and root planing led to a significant reduction in calprotectin levels in GCF. Moreover the clinical parameters were also reduced in both the groups.But the reduction was more in LASER plus scaling and root planing when compared to SRP alone.

Key words: Calprotectin, Low level Laser, Diabetic mellitus, Chronic Periodontitis